

STATEMENT OF BASIS
Two Rivers Lumber Co., LLC
Demopolis, Marengo County, Alabama
Facility/Permit No. 105-S007

This draft initial Title V Major Source Operating Permit (MSOP) is issued under the provisions of ADEM Admin. Code chap. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

Two Rivers Lumber Co., LLC (TRL) is an existing facility that manufactures dimensional lumber from Southern yellow pine logs located in Demopolis, Alabama. TRL operates the following significant emission units: two 15.4 MBF/hr continuous direct-fired lumber dry kilns (DPK-1 & DPK-2) with a 38.8 MMBtu/hr natural gas-fired burners and associated 4 MMBtu/hr natural gas-fired kiln condensate evaporators (CE-1 & CE-2); a dry lumber planer mill with a cyclofilter (PM-1); a sawmill (SM-1); and various byproduct material storage bins. Other insignificant activities include log debarking, log bucking, bark hog, and sawmill chipper.

Applicability: Federal Regulations

Title V

TRL became a major source under Title V regulations on August 21, 2017, when temporary authorization to operate was issued for the sawmill, green end operations, one 15.4 MBF/hr continuous direct-fired lumber dry kiln with a 38.8 MMBtu/hr natural gas-fired burner and associated 4 MMBtu/hr natural gas-fired kiln condensate evaporators, and the dry lumber planer mill with a cyclofilter. The potential emissions for volatile organic compounds (VOC) exceeds the 100 TPY major source threshold. The facility is also a major source of hazardous air pollutants (HAP) since the facility-wide potential emissions of combined HAP exceed 25 TPY and the facility-wide potential emissions of a single HAP (methanol) exceed 10 TPY.

Prevention of Significant Deterioration (PSD)

This facility is located in Marengo County, which is an attainment area for all criteria pollutants. The facility operations are not one of the listed 28 major source categories; therefore, the major source threshold of concern is 250 TPY. The facility is currently a major source under PSD regulations for VOC. TRL is not located within 100 km of any PSD Class I Area.

New Source Performance Standard (NSPS)

No applicable NSPS has been promulgated for any process at this facility.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

NESHAP requires that any facility whose potential emission of hazardous air pollutants (HAPs) exceed 10 TPY of a single hazardous air pollutant (HAP) or 25 of combined HAPs must control these emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. The NESHAP standards are established for source categories and prescribed based on whether the source is “existing” or “new”. This facility would be considered

an “existing” source. The facility is a major source for HAPs and an affected source under the NESHAP Subpart DDDD, *Plywood and Composite Wood Products* (PWCP MACT).

ADEM Admin. Code r. 335-3-11-.06(81)/40 CFR Part 63, Subpart 63 DDDD
NESHAP for Plywood and Composite Wood Products (“PCWP MACT”)

The PCWP MACT regulates HAP emissions from activities associated with the manufacture of plywood and other composite wood products, including stand-alone lumber kilns, in accordance with 40 CFR §63.2232. Processes that are not subject to the compliance options or work practice requirements specified in 40 CFR §63.2240, such as the lumber kilns, are specifically not required to comply with the compliance options, work practice requirements, performance testing, monitoring, startup/shutdown/maintenance (SSM) plans, and recordkeeping or reporting requirements of this subpart, or any other requirements in 40 CFR 63 Subpart A, except the initial notification requirements in 40 CFR §63.9(b) in accordance with 40 CFR §63.2252. The DPK-1 & DPK-2 are considered affected sources and are only subject to the initial reporting requirements.

There are no other facility sources subject to a NESHAP.

Applicability: State Regulations

Particulate Matter

The planer mill cyclofilter, DPK-1, and DPK-2 are each subject to the particulate matter (as TSP) emission limitations of ADEM Admin. Code r. 335-3-4-.04(1) for Process Industries-General. The allowable emission rate for each process is calculated using the following process weight equation:

$$E = 3.59P^{0.62} \quad (P < 30 \text{ tons/hour})$$

or

$$E = 17.31P^{0.16} \quad (P \geq 30 \text{ tons/hour})$$

where E = Emissions in pounds/hour

P = Process weight in tons/hour

Both 4 MMBtu/hr natural-gas fired kiln condensate evaporators (CE-1 & CE-2) are subject to the particulate matter emission limitation of ADEM Admin. Code r. 335-3-4-.03. The allowable emission rate for this boiler is calculated using the equation below:

$$E = 1.38H^{0.44}$$

where E = Emissions in lb/million BTU

H = Heat Input in millions of BTU/hr

Visible Emissions

All sources of particulate emissions are subject to the State visible emission standards of ADEM Admin. Code r. 335-3-4-.01(1), which states that each stationary source at the facility shall not

emit particulate emissions of an opacity greater than twenty percent (20%), as determined by a six-minute average, more than once during any 60-minute period, and shall not at any time emit particulate of an opacity greater than forty percent (40%), as determined by a six-minute average.

Sulfur Oxides (SO_x)

Both 38.8 MMBtu/hr natural gas-fired burners and both 4 MMBtu/hr natural-gas fired kiln condensate evaporators (CE-1 & CE-2) are subject to the sulfur oxides (as SO₂) emission limitations of ADEM Admin. Code r. 335-3-5-.01(b), which limits the boilers to 4.0 lb/MMBtu heat input.

Emission Testing and Monitoring

EU 001 Sawmill and Green End Operations

- *Green End Operations [Log Debarker (LD-1), Log Bucking (LB-1), Bark Hog (BH-1), and mechanical conveyors to the Bark Storage Bin (BSB-1)]*
- *Sawmill (SM-1), Sawmill Chipper (SC-1), and mechanical conveyors to the Sawdust and Chip Storage Bins (SDSB-1 & CSB-1)*
- *Truck loadout operations from storage bins (BSB-1)*

For compliance with the particulate and visible emission standards, emission monitoring for EU 001 would be subject to the following monitoring requirements:

1. While the process is operating, someone familiar with the process shall observe the debarker (LD-1), log bucking (LB-1), bark hog (BH-1), mechanical conveyors to the bark storage bin (BSB-1), sawmill (SM-1), sawmill chipper (SC-1), mechanical conveyors to the sawdust and chip storage bin (SDSB-1/CSB-1), and truck loadout operations from the storage bins (BSB-1/SDSB-1/CSB-1) a minimum of once weekly during daylight hours for greater than normal emissions as determined by previous observations.
2. Whenever observed emissions are greater than normal, the permittee shall initiate corrective action as soon as practicable but no longer than 24 hours from the time of observation, followed by an additional observation to confirm that emissions have been reduced to normal.

EU 002 15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-1) with 38.8 MMBtu/hr Natural Gas-fired Burner and associated 4 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-1)

EU 003 15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-2) with 38.8 MMBtu/hr Natural Gas-fired Burner and associated 4 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-2)

To ensure compliance under PSD regulations and Best Available Control Technology (BACT) limitations, emission monitoring for EU 002 and EU 003 would be subject to the following monitoring requirements:

1. Operate and maintain each kiln in accordance with the approved site specific operating and maintenance plan. TRL must maintain records of all maintenance performed and date(s) of maintenance.
2. Each kiln shall operate within a target temperature range between 220-260°F. Kiln temperature is the average of multiple, continuously monitored dry bulb measurements. Should the kiln temperature exceed 260°F, the kiln would be shutdown and reported to Air Division within two working days
3. Dry lumber to a target of 10% moisture or greater as measured as the infeed of the grader of the planer mill. Moisture content measurements below 10% will be flagged in the data collection system. Records of average moisture content per production run below 10% will be maintained by the General Manager. Production runs with average moisture content below 10% will be reported to the Air Division within two working days.
4. TRL would be required to calculate the combined kiln production, including monthly production and 12-month rolling totals within ten (10) days of the end of each calendar month.

No emission testing or monitoring for compliance with the State particulate and visible emissions standards would be required for the kilns or condensate evaporators due to the nature of the emissions.

EU 004 – Planer Mill (PM-1) Operations with a Shavings Storage Bin (SSB-1) and a Cyclofilter (CF-1)

Initial compliance testing would not be required for the cyclofilter at this time since calculations in the application indicate the capability of complying with the State allowable particulate emission rates and Synthetic Minor emission limits. If emission problems are observed in the future from these emission sources, testing may be required at that time.

For compliance with the particulate and visible emission standards, emission monitoring for EU 004 would be subject to the following monitoring requirements:

1. While the process is operating, someone familiar with the process shall visually observe the cyclofilter exhaust (CF-1) at least weekly during daylight hours for the presence of visible emissions.
2. While the process is operating, someone familiar with the process shall visually observe the planer mill (PM-1) and the planer shavings storage bin (SSB-1) at least weekly during daylight hours for greater than normal emissions as determined by previous observations of normal operations.
3. Whenever observed emissions are greater than normal from the planer mill (PM-1) and/or planer shavings storage bin (SSB-1), or if any visible emissions are observed from the cyclofilter exhaust (CF-1), corrective action shall be initiated as soon as practicable but no longer than 24 hours from the time of observation, followed by an

additional observation to confirm that emissions have been reduced to normal (PM-1/SSB-1) or eliminated (CF-1).

4. The cyclofilter shall be physically inspected for proper operation and cleaned, if needed, at least annually, but more frequently if visible emissions are observed.

Recordkeeping and Reporting Requirements

EU 001 Sawmill and Green End Operations

- *Green End Operations [Log Debarker (LD-1), Log Bucking (LB-1), Bark Hog (BH-1), and mechanical conveyors to the Bark Storage Bin (BSB-1)]*
- *Sawmill (SM-1), Sawmill Chipper (SC-1), and mechanical conveyors to the Sawdust and Chip Storage Bins (SDSB-1 & CSB-1)*
- *Truck loadout operations from storage bins (BSB-1)*

EU 004 – Planer Mill (PM-1) Operations with a Shavings Storage Bin (SSB-1) and a Cyclofilter (CF-1)

TRL would be required to maintain records of the required emission monitoring for Emission Unit Nos. 001 and 004 on-site in a permanent form suitable for inspection and readily available for inspection for at least five (5) years from the date of generation of each record. These records would include (as applicable):

- The date, time, and results of each emission observation;
- The date(s), time(s), nature, and results of any corrective action taken when visible emissions were observed; and
- The date(s) the control device was inspected for proper operation and, if the results of the inspection indicated that cleaning or emission-related maintenance was needed, the date(s) and nature of the cleaning/maintenance performed.

EU 002 15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-1) with 38.8 MMBtu/hr Natural Gas-fired Burner and associated 4 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-1)

EU 003 15.4 MBF/hr Continuous, Dual Path Direct-fired Lumber Dry Kiln (DPK-2) with 38.8 MMBtu/hr Natural Gas-fired Burner and associated 4 MMBtu/hr Natural Gas-fired Kiln Condensate Evaporator (CE-2)

TRL would be required to maintain records of its actions taken to comply with its approved site specific operating and maintenance plan for the kilns. TRL would be required to maintain records of the kiln production, including monthly production and 12-month rolling totals. Within ten (10) days of the end of each calendar month, records of the total throughput for the last calendar month shall be recorded and the rolling 12-month total updated. These records shall be maintained in a permanent form readily available for inspection. The records shall be retained for a period of five (5) years from the date of generation with the most recent two years being on-site.

Facility-wide Reporting Requirements

The facility would be required to include the following information (as applicable) in the Semiannual Monitoring Report required by General Permit Proviso No. 21:

- The combined throughput records of the kilns (DPK-1 & DPK-2) for each month and consecutive 12-month period during the reporting period;
- A statement describing the emission monitoring that was required during the period, whether all emission observations were completed as required, and if not, the date(s) and reasons(s) why the monitoring was not performed;
- A statement as to whether the annual inspection(s) of the control device(s) was accomplished during the reporting period, and if so, the date and results of the inspection(s); and
- The date(s), nature, and results of any corrective action taken when (1) a deviation from an emission monitoring parameter was observed or (2) an inspection of the control device indicated that cleaning or emission-related maintenance was needed.

The facility is required to submit an Annual Compliance Certification for each source to the Air Division as part of the Annual Compliance Certification required by the MSOP. This compliance certification must include the following for each source, as applicable:

- The identification of each term or condition of this permit that is the basis of the certification;
- The compliance status, whether continuous or intermittent;
- The method(s) used for determining the compliance status of the source, currently and over the reporting period; and
- Other facts the Department may require to determine the compliance status of the source.

Compliance Assurance Monitoring (CAM)

40 CFR Part 64, Compliance Assurance Monitoring, applies to any pollutant-specific emission unit at a major source that is required to obtain an operating permit, in accordance with 40 CFR 64.5, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It used a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY of a criteria pollutant, 10 TPY of an individual HAP, or 25 TPY of total HAP.

According to the application, there are no emission sources that have, prior to a control device, the potential to emit greater than 100 TPY of any criteria pollutant. Therefore, TRL is not required to submit a CAM plan for the initial MSOP.

Recommendation

Based on the above analysis, I recommend that Two Rivers Lumber Co., Inc. be issued a Major Source Operating Permit (105-S007) pending a 30-day public notice period and a 45-day EPA review.

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Date